

Title (en)
AGRICULTURAL APPARATUS AND METHOD

Title (de)
LANDWIRTSCHAFTLICHE VORRICHTUNG UND VERFAHREN

Title (fr)
DISPOSITIF ET PROCÉDÉ AGRICOLES

Publication
EP 3751983 A4 20211110 (EN)

Application
EP 19750655 A 20190131

Priority
• US 201815893947 A 20180212
• US 2019015978 W 20190131
• US 201762571437 P 20171012

Abstract (en)
[origin: US10136587B1] A conveyor system (4, 5) moves vertical poles (2) in an agricultural facility between a growing area (20) and a workstation (W). Each pole carries plant growing containers (3) at multiple levels (H1-H9). An irrigation reservoir (30) may be mounted atop each pole. Irrigation lines (31-33) from the reservoir may be individually metered (35) at each level to compensate for differing water pressure with height. Sensors (40) in the reservoir and at each level of the poles may provide a controller (36) with data input. The controller may impose different growing conditions in different areas of the facility, including vertically different grow areas (20A, 20B), and controls pole movements and locations selectively to provide a sequence of poles at the workstation ready to harvest on a demand schedule. The workstation may have multiple heights (W1, W2, W3) for tall poles that increase plant density per facility footprint.

IPC 8 full level
A01G 9/02 (2018.01); **A01G 27/02** (2006.01); **A01G 31/04** (2006.01)

CPC (source: EP US)
A01G 7/02 (2013.01 - US); **A01G 7/045** (2013.01 - US); **A01G 9/022** (2013.01 - US); **A01G 9/023** (2013.01 - EP US); **A01G 9/088** (2013.01 - US); **A01G 9/143** (2013.01 - US); **A01G 9/18** (2013.01 - US); **A01G 9/20** (2013.01 - US); **A01G 9/247** (2013.01 - US); **A01G 9/249** (2019.04 - EP); **A01G 25/09** (2013.01 - US); **A01G 25/165** (2013.01 - US); **A01G 27/003** (2013.01 - US); **A01G 27/005** (2013.01 - US); **A01G 27/008** (2013.01 - US); **A01G 31/045** (2013.01 - EP US); **B65G 9/002** (2013.01 - EP US); **B65G 35/06** (2013.01 - US); **B65G 43/08** (2013.01 - US); **B65G 2201/0202** (2013.01 - EP US); **B65G 2203/0208** (2013.01 - EP US); **B65G 2203/0283** (2013.01 - EP US); **B65G 2203/042** (2013.01 - EP US); **Y02P 60/21** (2015.11 - EP)

Citation (search report)
• [YA] US 9591814 B2 20170314 - COLLINS FRED [US], et al
• [Y] US 8418403 B1 20130416 - NUTTMAN THOMAS L [US]
• [Y] US 2016014977 A1 20160121 - ESAKI AKIRA [JP], et al
• [Y] US 2015296726 A1 20151022 - HIGGINS KEVIN WHITLEY [US]
• See references of WO 2019156880A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
US 10136587 B1 20181127; CA 3075402 A1 20190418; CA 3075410 A1 20190815; EP 3751983 A1 20201223; EP 3751983 A4 20211110; US 10225994 B1 20190312; US 11369063 B2 20220628; US 2020154646 A1 20200521; US 2020236869 A1 20200730; WO 2019074684 A1 20190418; WO 2019156880 A1 20190815

DOCDB simple family (application)
US 201815893947 A 20180212; CA 3075402 A 20180928; CA 3075410 A 20190131; EP 19750655 A 20190131; US 2018053252 W 20180928; US 201816164865 A 20181019; US 201816634938 A 20180928; US 2019015978 W 20190131; US 201916634940 A 20190131